

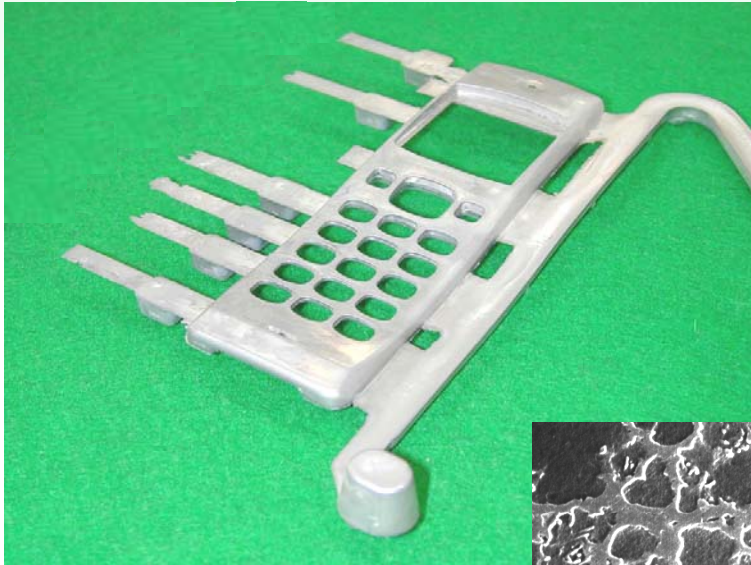
New Magnesium Alloy

HITACHI
Inspire the Next

HITMAGTM

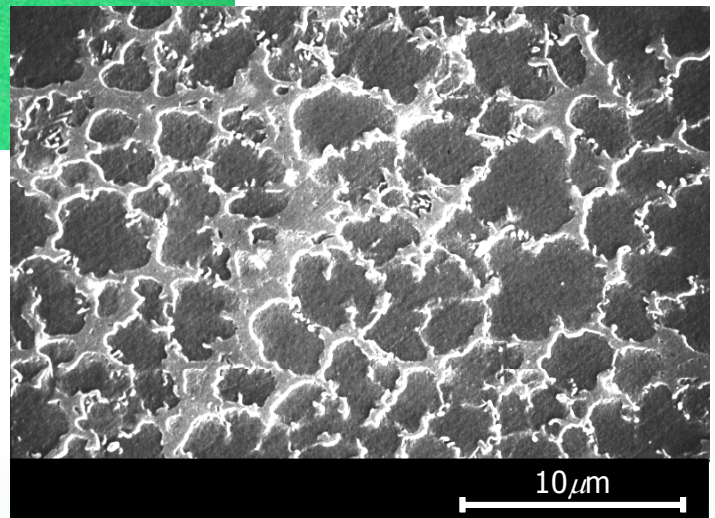
.... providing high fluidity

HITMAG is a new Magnesium Alloy developed by HITACHI with a lower melting temperature than AZ91, providing excellent fluidity, high creep strength and corrosion resistance with applications in Thixomolding[®] and Die Casting.



Thixomolded Sample
using HITMAG

Microstructure of
HITMAG



APPLICATIONS

Automotive:

- Housing for Motor, Alternator, etc.
- Ignition Key Housing
- Valve Cover
- Engine Cover
- Steering Wheel Core
- Instrument Panel
- Seat Frame
- Oil Pan, etc.

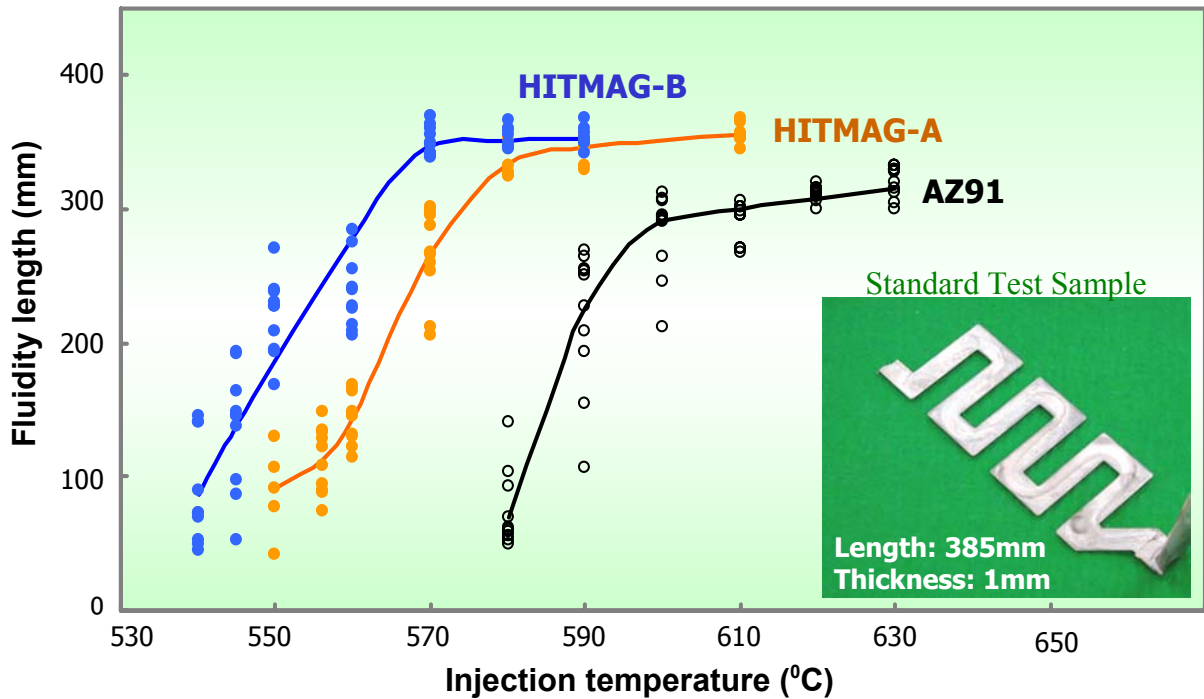
Electronics:

- Digital Camera Body
- PC Projector Body
- Mobile Phone Case
- Laptop Case, etc.

Casting Process:

- Thixomolding[®]
- Die Casting

Fluidity Characteristics



Material Properties

Physical Properties

Alloy	Liquidus Temperature (°C)	Solidus Temperature (°C)	Density (g/cm ³)	Thermal Conductivity (W/m·K)	Specific Heat (J/g·K)
AZ91D	598	425	1.81	51.2	1.02
HITMAG-A	567	425	1.92	36.0	0.93
HITMAG-B	556	411	1.96	35.6	0.93

Mechanical Properties*¹

Alloy	Vickers Hardness (Hv 50g)	Tensile Strength (MPa)	Proof Stress (MPa)	Elongation (%)
AZ91D	83	265	138	3.4
HITMAG-A	103	264	168	1.5
HITMAG-B	104	301	163	1.6

*1; 0.7mm Sample Thickness

Notes:
Design & specifications are subject to change without notice.
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